

Amendments to the Specification:

Please replace the Title with the following amended Title:

PASSIVE DRY POWDER INHALER DEVICE CONTAINING APOMORPHINE AND METAL STEARATE FORMULATION

Please add the following new heading and new paragraph after the Title:

CROSS REFERENCES TO RELATED APPLICATIONS

The present application, U.S. Serial No. 10/552326, is a national phase application of International Application No. PCT/GB2004/001628, filed on April 14, 2004, which claims priority to U.S. Serial No. 10/413022, U.S. Serial No. 10/621964 and GB0321612.4.

Please replace the wording "Figure 8A to 8G illustrate various versions of medicament packs which promote the entrainment and evacuation of the dose therefrom" on page 19, lines 27-29 with the following:

Figures 8A and 8B illustrate two preferred embodiments of medicament packs;

Figures 8C to 8G and 8AA illustrate cross sectional views of various medicament packs;

Please add the following new paragraphs after page 20, line 2:

Figure 9 illustrates another embodiment of blister pack for containing a dose of medicament for use in an inhaler;

Figure 10 is a table to illustrate the performance of some of the medicament packs shown in Figures 8A to 8G;

Figures 11A to 11G illustrate various medicament packs incorporating a aerosolizing nozzle according to the invention;

Figure 12 is a schematic drawing of a conventional pressurized gas powered active dry powder inhaler;

Figure 13 is a simplified cross-sectional side elevation of a valve assembly according to the invention;

Figure 14 is a first modified version of the valve assembly illustrated in Figure 13;

Figure 15 is second modified version of the valve assembly illustrated in Figure 13;

Figure 16 is a third modified version of the valve assembly illustrated in Figure 13;

Figure 17 is a perspective view of an actual breath actuated valve module forming part of an inhaler according to the invention;

Figure 18 is top plan view of the breath actuated valve module shown in Figure 17;

Figure 19 is a cross-sectional side elevation of the breath actuated valve module taken along the section A-A in Figure 18;

Figure 20 is a cross-sectional side elevation of the breath actuated valve module taken along the section B-B in Figure 18;

Figure 21 shows an inhaler and a blister according to the present invention;

Figure 22 is a top cross-section of a vortex nozzle;

Figure 23 shows the general form of a vortex chamber of the inhaler shown in Figure 22;

Figure 24 shows another view of the vortex chamber shown in Figure 23;

Figure 25A is a side-view of a vortex chamber with a round inlet port;

Figure 25B is a sectional view along line D-D of the vortex chamber of Figure 25A;

Figure 26A is a side view of a vortex chamber with a rectangular inlet port;

Figure 26B is a sectional view along line E-E of the vortex chamber of Figure 26A;

Figure 27 shows a vortex chamber with an arcuate inlet conduit;

Figures 28-31 show detail of embodiments of the exit port of the inhaler in accordance with the invention;

Figure 32 illustrates an asymmetric vortex chamber in accordance with an embodiment of the invention;

Figure 33 is a sectional view of a vortex chamber of an asymmetric inhaler in accordance with

another embodiment of the invention;

Figure 34 is a perspective view of a vortex chamber according to Figure 33;

Figure 35 is a sectional view of the vortex chamber of Figure 34;

Figure 36 is a perspective view of a detail of the vortex chamber of Figures 34 and 35;

Figure 37 is a plan view of the detail of Figure 36;

Figure 38 is a plan view of a variation of the detail of Figure 37;

Figure 39 shows a schematic set-up of a conventional type spray drying apparatus with a 2-fluid nozzle;

Figures 40A-40D are SEM micrographs of 2-fluid nozzle spray dried powders which were co-spray dried with increasing amounts of 1-leucine (0%, 5%, 25% and 50% - w/w) -without secondary drying ;

Figures 40E-40H are SEM micrographs of 2-fluid nozzle spray dried powders which were co-spray dried with increasing amounts of 1-leucine (2%, 5%, 10% and 50% w/w), after secondary drying;

Figure 41 shows a schematic diagram of an ultrasonic nebuliser producing fine droplets;

Figure 42 shows a schematic set-up of a spray drier incorporating an ultrasonic nebuliser;

Figures 43A and 43B show SEM micrographs of spray dried nebulised heparin alone and with 10% w/w leucine, without secondary drying;

Figure 44 shows a typical size distribution curve of three repeated tests of spray dried nebulised heparin (with no FCA);

Figures 45A-45C show a comparison between particle size distribution curves of 2- fluid nozzle spray dried powders and ultrasonic nebulised powders comprising a blend of heparin and leucine (2% w/w, 5% w/w and 10% w/w);

Figure 46 shows a comparison between particle size distribution curves of secondary dried and not secondary dried powders;

Figures 47A and 47B are the results of testing formulation "3A";

Figures 48A and 48B are the results of testing formulation "4B";

Figures 49A and 49B are the results of testing formulation "5B";

Figures 50A and 50B are the results of testing formulation "6C";

Figures 51A and 51B are the results of testing formulation "7C";

Figures 52A and 52B are the results of testing formulation "8C";

Figures 53A and 53B are the results of testing formulation "9B".

Figure 54 is a graph presenting through life dose uniformity results for the primary candidate "6C";

Figure 55 is a graph presenting through life dose uniformity results for formulation "12A";

Figure 56 shows the particle size distribution of the raw material micronised lactose;

Figure 57 shows the particle size distribution of the raw material apomorphine;

Figure 58 shows the particle size distribution of the raw material clobozam;

Figure 59 shows the particle size distribution of the clobozam formulation comprising 95% clobozam and 5% Mechano-Fused magnesium stearate;

Figure 60 shows the particle size distribution of the clobozam formulation comprising 95% clobozam and 5% co-jet milled Aerocene;

Figure 61 shows the particle size distribution of the clobozam formulation comprising 95%

Figure 62 shows the particle size distribution of the apomorphine formulation comprising 75% lactose, 20% apomorphine and 5% co-jet milled leucine;

Figure 63 also shows the particle size distribution of the apomorphine formulation comprising 75% lactose, 20% apomorphine and 5% co-jet milled leucine;

Figure 64A shows data for six formulations, which are identified in column 5000;

Figure 64B provides data for an additional four formulations; and

Figures 65 and 66 illustrate the average amount (in micrograms) of drug that was delivered to each of the components of the ACI, and retained in the device of examples 2 and 3 respectively.